What is claimed is:

1. A coryneform bacterium which has an L-arginine- or L-lysine-producing ability, and wherein said bacterium is modified so that glutamine synthetase activity is enhanced as compared to a wild-type coryneform bacterium.

2. The coryneform bacterium of claim 1, which comprises a modification that results in adenylylation of glutamine synthetase being reduced or eliminated.

3. The coryneform bacterium of claim 2, wherein said modification is selected from the group consisting of

a) mutating the adenylylation site of glutamine synthetase;

b) reducing the intracellular activity of glutamine synthetase adenylyltransferase,

c) reducing the intracellular activity of PII protein, and

d) increasing the intracellular activity of glutamine synthetase by modifying a nitrogen metabolism regulation protein.

4. The coryneform bacterium of claim 3, wherein said adenylylation site comprises position 405 of SEQ ID NO: 20 and wherein said mutation comprises replacement of the wild-type tyrosine residue with another amino acid.

5. The coryneform bacterium of claim 3, wherein a gene encoding the glutamine synthetase adenylyltransferase on a chromosome of said bacterium is disrupted.

6. The coryneform bacterium of claim 3, wherein the nitrogen metabolism regulation protein is an *amtR* gene product which does not function normally,

7. The coryneform bacterium of claim 6, wherein said *amtR* gene product on a chromosome of said bacterium is disrupted.

8. The coryneform bacterium according to claim 1, which is modified so that an arginine repressor does not function normally.

9. The coryneform bacterium of claim 8, wherein a gene on a chromosome of said bacterium encoding the arginine repressor is disrupted.

10. A method for producing L-arginine or L-lysine, comprising the steps of

a) culturing the coryneform bacterium according to claim 1 in a medium, and

b) allowing accumulation of L-arginine or L-lysine in the medium, and

c) collecting the L-arginine or L-lysine from the medium.